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Formicidæ of Lower California, Mexico.

BY

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Since the publication of my paper, published in these Proceedings (pp. 26–36, ante), I have again received, through Mr. W. J. Fox of Philadelphia, another small collection of ants from Lower California, collected by Dr. Gustav Eisen, among which are some species not previously recorded from the peninsula of Lower California, and also several new forms, which will herewith be described. I hardly need to say that our knowledge of the Formicidæ of Lower California is still very limited, and that the material now available for study represents but a small fraction of the genera and species actually occurring in that interesting region.

FORMICIDÆ.

1. CAMPONOTUS SAYI Emery, subsp. BICOLOR, n. subsp.

☿ major: Length, 9–10 mm. Head, 2.8x2.6; scape, 2 mm.; post. fem., 2.6 mm.

Almost identical with the typical form, though larger and more robust. The head is somewhat longer and its posterior margin more deeply concave; the surface more highly polished; eyes smaller; anterior emargination of the clypeus broader and more distinct. Mandibles smoother, rather more highly polished, not striated or but very feebly so, and with fewer punctures. The sutures between thoracic segments are deeper, especially that between the meso- and metanotum; the mesonotum more elevated.

Colorotion as in *sayi*, though the head somewhat darker red.

☿ minor: Length, 3–7 mm. The head of this form is much narrower than in the ☿ major, particularly pos-

teriorly, and comparatively longer than in *sayi;* the eyes are also smaller and less strongly projecting; the prothorax more flattened above, its sutures deeper, and the scale narrower and stouter. It differs from *sayi* also considerably in the coloration of the head, thorax and scale, particularly in the smaller specimens.

Head black; the clypeus, cheeks and space in front of eyes red; the meso- and metanotum above, the upper angle of the metathoracic declivity and the scale black or dark brown. Otherwise as in *Camp. sayi.*

♀. Length, 11 mm.; expanse of wings, 24 mm.

The head is either red, with only the posterior edge of the vertex more or less distinctly dusky, or of the same coloration as in the worker minor. Thorax highly polished, red; posterior edge of pronotum above, a large median spot anteriorly and a subdorsal vitta each side of mesonotum, scutellum, mesosternal plate and abdomen black. Legs and scale red. Posterior margin of abdominal segments yellowish. Wings pale brownish, veins and stigma darker.

♂. Length, 6–7 mm. Entirely black, polished. Posterior margin of abdominal segments, extreme tip and genital valves yellowish-white; the inner pair of valves gradually brownish towards the end, the apex of the upper pair blackish.

Described from many workers, two females and three males.

Chuparosa, Sierra Laguna. Type, No. 4476, U.S.N.M.

2. MYRMECOCYSTUS MELLIGER (Llave?) Forel, var. SEMIRUFUS Em.

M. melliger var. *semirufus* Emery, Zool. Jahrbücher, vii, Abtheil. f. Syst., p. 667.

One ♀. San Julio.

Absolutely identical with the dark form from Colorado.

3. PLAGIOLEPIS LONGIPES (Jerd.) Emery.

Formica longipes Jerdan, Madras Journ. of Litt. & Sc., xvii, 1851, p. 122.

Formica gracilipes Smith, Journ. of Proc. Linn. Soc. Zool., ii, 1857, p. 55.

Formica trifasciata Smith, Catal. Hym. Brit. Mus., vi, 1858, p. 27.

Prenolepis gracilipes Mayr, Verh. zool. bot. Ges. Wien, xii, 1862, p. 698.

Plagiolepis gracilipes Mayr, Tijdschr. v. Entom., x, 1867, p. 73.

Plagiolepis longipes Emery, Ann. Mus. Civ. Genova, xxiv, 1887, p. 247.

Plagiolepis gracilipes Rothney, Trans. Entom. Soc. London, 1889, p. 373.

Numerous ☿ ☿. Todos Santos.

This is the first record of the occurrence of this species in America. As far as observations go, it has heretofore been found only in India, British Burmah, Annam, China, the Sunda Islands, Australia and Samoa.

4. TAPINOMA PRUINOSUM Rog., var. ANALE André.

Tapinoma anale André, Revue d'Ent., vol. xii, 1893, p. 148.

☿. San Julio.

This variety has been also found in various localities in California and at Chihuahua, Mexico.

MYRMICIDÆ.

5. APHÆNOGASTER CARBONARIA n. sp.

☿. Length, 4–5 mm. Head elongate, longer than broad, rounded behind. Face and clypeus densely and finely striated, the striæ coarser and less dense posteriorly, the vertex almost smooth. Frontal area with a median carina. Mandibles longitudinally striated and with a few coarse punctures near the terminal edge. Prothorax with extremely fine striæ at the sides anteriorly. Mesothorax smooth. Metathorax with fine, transverse striæ above, the striæ longitudinal and coarser laterally at posterior half. Metathoracic spines wanting, their position

represented by minute, toothlike projections at the termination of the metathoracic ridges. Nodes of petiole erect, the posterior one stoutest. Head, thorax and abdomen furnished with rather sparsely set, fine, erect, yellowish hairs; those of the antennæ and legs shorter and less erect.

Color black, polished. Mandibles, flagellum and tarsi reddish-brown; the flagellum darkest towards base, with the apex of the joints blackish. Scape and legs dark brown.

This species may be easily mistaken for *Aph. Pergandei*, with which it agrees in size and coloration, but may be readily distinguished from it by the striated head and metathorax, the absence of metathoracic spines and the much higher second node of the petiolus.

Described from eight specimens. Type, No. 4478, U.S.N.M. Sierra Laguna and El Chinche.

6. APHÆNOGASTER JULIANA n. sp.

Length, 5–7 mm. Head quadrangular, somewhat longer than wide; its sides almost straight, faintly broader behind; posterior angles rounded. Surface polished, with fine and dense striæ, somewhat coarser in front of eyes and slightly diverging posteriorly; striæ of vertex transverse. Spaces between the striæ, with few, scattered, shallow punctures.

Mandibles stout, similar to those of *Pogonomyrmex*, with two prominent teeth at apex and three to four rudimentary teeth; the surface coarsely striated.

Prothorax transversely rugose, with the space between the rugæ granulated; meso- and metathorax longitudinally rugose and densely granulated between the rugæ at the sides of the metathorax. Spines of metathorax large and diverging posteriorly; the space between the spines finely granulated; the posterior declivity smooth.

First node of the petiole large, its sides parallel, stoutest at base, the apex rounded gently curved forward and with two longitudinal impressions. Second node broadly pyriform, stoutest posteriorly, and also with two longitudinal impressions above. Both joints are highly polished and minutely granulated.

Abdomen polished, finely shagreened and sparsely punctured. Hairs yellowish and rather sparse, more dense along posterior margin of abdominal segments; those of the anterior margin of the clypeus are longer and stouter, while those on the under side of the head are very long, slender and curved forward. Hairs of antennæ and legs shortest and semi-erect.

Color dark brown, almost black, the thorax somewhat lighter. Antennæ, mandibles and legs reddish-brown.

This species resembles very much *Aph. Andrei*, which differs from it, however, in the much coarser sculpture of the head and thorax, in the stronger constriction between the meso- and metathorax, the stouter and less strongly curved first node of the petiolus, in the rougher sculpture of both nodes and in the very profuse, bristling, white and glittering hairs, which are most conspicuous on the abdomen and legs.

Described from seven specimens.

San Julio. Type,- No. 4479, U.S.N.M.

7. CREMASTOGASTER BREVISPINOSA Mayr.

Cremastogaster brevispinosa Mayr, Sitzber. Akad. Wiss. Wien, lxi, 1870, p. 403.

Cremastogaster brevispinosa Mayr, Verh. zool. bot. Ges. Wien, xx, 1870, p. 992.

Cremastogaster brevispinosa Mayr, Verh. zool. bot. Ges. Wien, xxxvii, 1887, p. 626.

This species has, so far, been recorded from Costa Rica and the U. S. of Columbia.

Six specimens. Magdalena.